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ABSTRACT

Using data drawn from the literature on two-and four-year colleges in the United States, this report compares public two-year institutions with private two-year institutions and four-year colleges and universities from the standpoint of costs, quality of education, and the employability of graduates. Chapter 1 introduces common assumptions relating low cost to low quality and presents the research questions developed to facilitate the investigation of cost, quality, and employability. Chapter 2 discusses the background and significance of the study including a review of the relevant literature. Chapter 3 outlines the procedures for collecting and treating the data. Chapter 4 presents findings in the areas of costs of attending college, educational quality, national testing, college enrollment, transfer education, student satisfaction, employability of and employment prospects for graduates, and concerns of higher education. Finally, chapter 5 discusses study implications, offers recommendations, and highlights the following major findings: (1) the nation's public two-year institutions have been providing the least expensive college education; (2) the education provided by the two-year colleges was of a quality comparable to four-year institutions; and (3) graduates of public two-year colleges have a high rate of employability. (HB)

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A Position Paper On THE LOW COST AND HIGH QUALITY EDUCATION PROVIDED BY PUBLIC TWO-YEAR INSTITUTIONS

EDUCATION POLICY SYSTEMS

by

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A PRACTICUM PRESENTED TO NOVA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF EDUCATION

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ABSTRACT

Many people assumed that the low cost education provided by the nation's public two-year institutions was of commensurately low quality but, no study existed which substantiated the low cost/high quality position; therefore, the purpose of this study was to develop a position substantiating the low cost and high quality education provided by public two-year colleges and the concomitant high employment rate of the graduates.

An extensive review of the literature produced the data for the study. Data about the nation's private two-year institutions and four-year colleges and universities were compared with public two-year institutions in terms of the educational cost and quality and employability aspects stated in three major research questions. Pertinent data for each research question was presented and summarized in narrative form and supported by tables.

The extensive review of available information on the subjects of cost, quality and employability resulted in three major findings: 1. The nation's public two-year institutions have been providing the least expensive collegiate education. 2. The grade point averages (GPA's) of similar populations of transfer and native students were comparable; therefore, the education provided by public two-year institutions and four-year colleges and universities was of a comparable quality. 3. Graduates of public two-year colleges have a high rate of employability.

Three major recommendations were drawn from the findings; 1. Public two-year institutions should keep educational costs to students and their families at the lowest possible minimum without sacrificing educational quality. 2. Public two-year institutions should retain the "open door" admissions policy to guarantee that deserving and capable students will be afforded a collegiate experience within educationally justifiable and economically feasible limits. 3. Public two-year institutions should continue to use advisory committees effectively, especially those concerned with occupational and cooperative education.

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Chapter 1

INTRODUCTION

American higher education was considered big business; the students were the customers, the curriculum was the major stock on the shelf, the faculty was the sales force, the campus was the primary marketplace, and tuition and credits were currencies. This generalized and simplified analogy was appropriate, especially in terms of the way Americans viewed purchasing; the public was the consumer and the college was the service provider. Along the way, the business world had taught Americans to equate low cost with low quality and high cost with high quality. Nevertheless, the public continued to engage in comparison shopping and search longingly and hopefully for the ideal purchase; a low cost item of high quality.

The consumer was typically suspicious and unbelieving when an ideal purchase was encountered. This was simply not the norm; therefore, something was wrong. The nation's public two-year colleges have suffered from this kind of consumer reaction over the years because the colleges have not equally confronted and successfully resolved both sides of the problem. It has not been difficult to prove to potential consumers that the

education provided by public two-year colleges was comparatively less costly. However, no carefully planned and consolidated effort has been mounted to convince the public that the very same education was comparably high in quality and had an accompanying high employability rate for graduates.

Launching into a comparative analysis of the educational quality provided by public two-year institutions with that offered by public and private four-year colleges and universities would have been an extensive, arduous and eventually unrewarding task. A comparison of the quality of an institution's faculty, plant, equipment, resources, and reputation with that of another institution in order to determine which one offered the highest quality educational experience was not necessary. A much simplier approach to resolving the problem was to compare institutional products (students) in terms of academic performance.

Many people including some educators have assumed that the low cost education provided by the nation's public two-year institutions was of commensurately low quality but, no definitive and current study exists which substantiated the low cost/high quality position; therefore, the purpose of this study was to develop a position substantiating the low cost and high quality education provided by the nation's public two-year colleges and the concomitant high employment rate of the graduates.

Three major research questions were developed to facilitate the investigation of cost, quality and employability.

1. How did the cost of education provided by the nation's public two-year institutions compare with the cost of the education provided by the nation's private two-year institutions and public and private four-year colleges and universities?

2. How did the grade point averages (GPA's) of students transferring from public two-year institutions to public four-year colleges and universities compare with the GPA's of "native" (regular) students at public four-year colleges and universities?

3. What was the average employment rate of graduates of representative public two-year institutions?

The researcher conducted an extensive review of the literature that dealt with the three research questions. Primary attention was focused on national or generalized data concerning public two-year institutions. Data about the nation's private two-year institutions and four-year colleges and universities were obtained and compared with public two-year institutions in terms of the educational cost and quality and employability aspects stated in the three research questions. Pertinent data for each research question was presented and summarized in narrative form and supported by tables.

The primary reason for investigating the three

major research questions was to derive contributions to a generalized and contemporary mission statement for the public two-year institution. A number of useful recommendations surfaced that were helpful in drafting the mission statement. The recommendations were compared with information from the educational literature on the subject of emerging issues and concerns and areas that the recommendations truly represented essential information that had to be considered when drafting a contemporary mission statement for the public two-year institution.

Chapter 2

BACKGROUND AND SIGNIFICANCE

Institutional Significance

The college was involved during 1982-83 in the development of substantive and publishable position papers on several topics relevant to contemporizing the mission of the public two-year institution. The college chose to assume this responsibility and play an initial role because the effort was sorely needed. After undergoing thorough local and national reviews, the papers were presented as a collection at "The League for Innovation" anniversary convention during 1983; thereafter, the papers became chapters in a book published by Jossey-Bass Inc.

Module/Practicum Relationship

This author was responsible for substantiating the position that the nation's public two-year institutions offered educational experiences that were not only of low cost but were also of high quality. The position paper also offered ways for two-year institutions to use the information to strengthen their academic status in higher education. In addition, this author's derivation of an existing mission for the colleges in light of the findings

from the investigation resulted in several recommendations which incorporated the contemporary and utilitarian findings. A change of even a modest nature in any institution's mission forces continual revision of many policies and procedures especially those primarily affecting the reason for the college's existence; curriculum planning (design) and instructional implementation (delivery).

Review of Literature

This author's position was that the nation's public two-year institutions offered education that was not only of low cost but also of high quality. The position was substantiated through a thorough analysis of current literature providing comparative data on the cost of attending college and on the success of students transferring from public two-year institutions to public four-year institutions with students receiving their entire education at public four-year institutions. One additional thought involved the success of graduates at obtaining jobs. Recent information indicated that the graduate with the low cost educational experience was generally just as successful at finding a job as the counterpart with the high cost experience.

Cost of attending college. The cost of a college education at the nation's public two-year institutions was less than the cost at public four-year institutions and far

less than the cost at private four-year institutions (Cass and Birnbaum, 1981). According to the College Entrance Examination Board (1982a), the total cost of attending college during 1982-83 academic year was expected to average 11% higher than the previous year. The one-year increase in average total cost was 10.9% for students commuting to public two-year colleges. The total cost for a college education was expected to rise dramatically during the next few years for students attending private two-year institutions and four-year colleges and universities. On the other hand, the total cost for an education at one of the nation's public two-year institutions or four-year colleges or universities was expected to undergo only a modest increase (Anderson, 1982).

A study sponsored by three public college associations concerning students receiving financial aid revealed that even with federal aid and a student's own income and money from other sources the average independent student receiving aid still fell $1,488 short of covering education and living costs. The typical dependent student, one who received some family support, fell short by $443. Almost no students received aid equal to the total costs of college, even counting their own earnings and any family assistance (The Chronicle of Higher Education, 1982a).

State-level policy leaders were surveyed during the Fall, 1981 to determine the emerging issues in post-secondary education among the states. Two responses were

that funding for higher education was losing ground to inflation and families were expected to shoulder an increasing proportion of college costs (Van de Water, 1982).

Data released by the United States Department of Commerce concerning state support for colleges revealed that the recent increase in appropriations was the smallest in more than 20 years; only 6% above the total for 1981-82. The annual increases in state tax funds intended for higher education averaged close to 14% over the past 20 years. The reduced spending reflected the economic slowdown brought about by depressed collections of state sales taxes and income taxes. In addition, the inflation rate turned the recent two-year gain of 16% in higher education appropriations into a 1% loss in purchasing power. Over the past 10 years, state appropriations for higher education have increased by 185%. The ten-year records, when adjusted for inflation of 132.5%, amounted to a real gain of 23% (Magarrell, 1982a).

A national opinion survey conducted by Group Attitudes Corporation (1982) of New York found that higher education had broad support among the general public. A majority of those surveyed favored continuing federally financed programs to aid higher education. Only 15% favored drastic cuts in such programs. The survey was sponsored by eleven higher education associations based in Washington, D.C. and New York City.

Educational quality. The College Entrance Examination Board's (1979) Admissions Testing Program (ATP) for high school seniors revealed that the Standard Achievement Test (SAT) verbal and mathematics scores were the lowest since 1972. A report issued by the College Entrance Examination Board (1982) attributed a recent rise in SAT scores to strong showings by minority groups. The national averages rose by 2 points in the verbal section and 1 point in the mathematics section for 1981-82; the first rise in 19 years. According to Watkins (1982), secondary and post-secondary educators across the country were calling for sweeping reforms of America's high schools. Numerous studies had identified an increasing number of problems in secondary schools. One study in particular revealed that half of the high school graduates attend college and 35% of those students are required to enroll in remedial courses.

A review of information concerning enrollments at public and private institutions for the Fall, 1982 revealed that 783 of every 1,000 students enrolled were on public campuses. The increase in total enrollment in public higher education for the Fall, 1982 was a result of the continuing growth of community colleges. They gained an estimated 62,045 students, up 1.5% to a total of 4,494,202 (Chronicle for Higher Education, 1982). The number of Americans aged 18 through 24 reached a peak during 1981. There were approximately 0.5% fewer during 1982. The

decline is expected to continue for another 14 years according to estimates by the Census Bureau (Magarrell, 1982).

A decline in selectivity, as measured by college entrance test scores has occurred in most colleges including leading universities. It was suggested that to be effective, reforms must align college preparatory programs in high school with the academic prerequisites of college work. Some individual colleges are tightening their entrance requirements and several states are making progress in their efforts to improve the preparation of college-bound students (Myers, 1982).

An extensive review by Thompson (1978) revealed the existence of a phenomenon labeled "transfer shock". Transfer students' grade point averages decreased in the first semester after their transfer to the four-year institution; but, the grades of the students who persisted in the four-year colleges generally improved in successive terms after transfer. Prather (1981) examined trends in academic performance from 1961 to 1979 for entering freshmen at Georgia State University. Among the study implications was the following: the slow progress of many freshmen with lower grades in their first 25 hours of coursework was countered in some cases by tutoring, counseling and special advisement. A study by Wenzel (1967) revealed that graduates of Miami-Dade Junior College transferring to the State University System of Florida

earned higher grades in the universities than they did on the junior college level after some decline in their first semester after transfer. Losak and Corson (1979) state the following: "When equated on ability before beginning their collegiate work, there was no significant difference in performance at the junior and senior years between community college graduates and those beginning their careers in the university."

Transfer students frequently encountered deficits in requirements for specific baccalaureate degrees and/or programs due to the lack of program integration and problems of transferability of credit. At Butler County Community College (BCCC), a project was developed to clarify some of the problems and to alleviate student fears. Program sheets were prepared listing university program requirements in Kansas and BCCC equivalencies. Contacts were asked for general information on transfer requirements and admissions procedures. The information and program sheets were compiled in a notebook and distributed to appropriate advisors and administrators, as well as made available to students and high school counselors (Strain, 1982).

A paper by Rendon (1980) statistically demonstrated the disproportionate concentration of minority students at two-year colleges. The paper presented recommendations for transfer education. McCracken (1980) examined the development, operation and benefits of community college

alumni organizations. The alumni association at Butler County College helped the college maintain undated files on former students and provided scholarships for students who transferred to upper division colleges. The creation of community/junior college alumni chapters among transfer students at Florida State University was discussed and included a description of the role played by the chapters in helping transfer students adjust to senior institutions.

Cumberland County College (1979) surveyed graduates regarding their satisfaction with CCC's transfer education program. Sixty-seven percent felt they had been well-prepared for transfer. Barnard (1980) conducted a survey of Illinois Valley Community College (IVCC) graduates to determine their attitudes toward the college. Ninety-five percent of the respondents indicated that they would recommend IVCC to other students. The Los Angeles City College District (1980) conducted a study to determine student perception of general education transfer courses. Eighty percent felt that instructional quality at the community college was equal or better than four-year college instruction. McMaster and Staatse (1980) conducted a survey to gather data on graduates from Mercer County Community College (MCCC) with respect to their opinions of the college. Most (95%) rated their MCCC education as satisfactory.

Employability of graduates. Morton College

developed a handbook on career alternatives for use by counselors and students. Advice was offered on chosing the best job (Snider and Valente, 1980). In the New England area, graduates with associate degrees generally sought employment in the same broad arena as holders of bachelor degrees. Those with two-year degrees in health, engineering or chemical technology and secretarial science had little trouble finding jobs (Bowen, 1975). Engineering graduates have not had trouble finding jobs in spite of the fact that the number of graduates continued to increase (Sheridar, 1980). A study of registered nurses residing in California revealed that associate degree (two-year) graduates and diploma (three-year) graduates were paid the same wages (Hunt, 1974). It may not be economically profitable for community college graduates holding degrees in computer science, nursing, nutrition and social work to obtain bachelor degrees when they have access to jobs for which all degree holders are eligible (Belanger and Lavalle, 1980). In reality, graduates of two-year institutions may be much more marketable than graduates of four-year colleges (Shea, 1977).

The Liberal Arts/Cooperative Education Program at Pima Community College made cooperative arrangements with businesses and industries to provide jobs for Liberal Arts students and helped to place the students in the jobs (Johnson, 1982). A cooperative venture between Broome Community College and Harpur College of the State

University of New York let students work simultaneously toward both a liberal arts bachelor's degree and a vocationally oriented associate in applied science degree (Shea and Stannard, 1977). A career education program served Comprehensive Employment and Training Act (CETA) participants by linking a college with CETA and enrolling the participants in an associate of science degree in urban life (Ocherman-Garza, 1982). A cooperative education program available to all students enrolled in engineering technology or business programs developed a pool of highly motivated individuals for entry level positions (McNutt, 1982). State Fair Community College developed an associate of science degree program in renewable energy resources having application in agriculture. Data showed a need for 447 trained people by 1983 (Allen and Fielding, 1981). Hagerstown Junior College (1982) has developed a handbook to guide advisory committees working with occupational programs. All of those highly successful employment preparedness efforts have provided many benefits to businesses, students and communities.

A follow-up study at Cerritos College to determine the employment rates of students completing vocational programs found that 81% of the former students were employed (Dennis-Rounds, 1981). Cumberland County Community College (1979) surveyed graduates regarding their occupational status and found that 85% were employed. Graduates who had earned an associate degree in liberal arts or career

programs at Greenfield Community College were surveyed to determine vocational pursuits; 84% of the graduates were employed (Bathroy and DiCarlo, 1980). A survey to assess the employment activities of vocational students who graduated from Lane Community College, found that 84% of the graduates were employed (Foellinger and Aspinwall-Lamberts, 1980). A follow-up study of Mercer County Community College graduates to ascertain their employment status revealed that 90% of the graduates were employed (McMaster, 1982). A report providing follow-up information on occupational graduates of Miami-Dade Community College indicated that 77% of the graduates were employed (Morris and Losak, 1980). The New Hampshire Technical Institute (1981) and the six New Hampshire vocational-technical colleges reported 92% of the graduates having been satisfactorily placed. Many had been placed as a result of the lifetime placement service provided by each institution. Tschechtelin and MacLean (1980) surveyed the 6,975 students who graduated from the Maryland Community College system during 1978 to assess the degree to which the colleges helped the students achieve their career goals. The employment rate among respondents whose goal was career development was 75%.

Concerns of higher education. State-level policy leaders were surveyed in the Fall, 1981 to determine the emerging issues in postsecondary education among the states.

The five most important issues identified were concerned primarily with educational costs and quality (Van de Water, 1982). The California State Postsecondary Education Commission (1981) examined issues likely to affect the California Community Colleges during the 1980's. The following concerns were discussed: open-admissions policies, articulation, transfer programs and remediation. The State Board of Directors for Arizona Community Colleges conducted a study to define the missions of the colleges. The study revealed priorities for transfer, occupational, general education and basic skills instruction (Richardson, 1982). The Los Angeles Community College District conducted a study to determine its role in meeting the educational needs of individuals in the servicing area. Several areas of emphasis for the local community colleges were discussed (Hoeck and Thor, 1982).

Chapter 3

PROCEDURES

Procedures for Collecting Data

The researcher conducted an extensive review of the literature - primarily studies and summaries of studies - that dealt with the following general topics: the comparative quality of the collegiate experience expressed in terms of student achievement (e.g. grade point average), and the comparative rates of employability among the graduates. Primary attention was focused upon national or generalized data concerning public two-year institutions. Data about the nation's private two-year institutions and public and private four-year colleges and universities were obtained and compared with data for public two-year institutions in terms of the cost of the educational experiences provided. Data concerning the nation's public and private four-year colleges and universities were obtained and compared with data for public two-year institutions in terms of the quality of the educational experiences provided. The employability of graduates of public two-year institutions was determined from available data.

Procedures for Treating Data

The study dealt with three major research questions: (1) How did the cost of the education provided by the nation's public two-year institutions compare with the cost of the education provided by the nation's private two-year institutions and public and private four-year colleges and universities? (2) How did the grade point averages of students attending and transferring from public two-year institutions compare with the grade point averages of the native students at private two-year institutions and public and private four-year colleges and universities? (3) What was the rate of employment of graduates of public two-year institutions? All pertinent data for each research question was presented and summarized in narrative form and them supported by tables as deemed appropriate and necessary by this researcher.

The procedures followed were not entirely consistent with those in the practicum proposal. A major problem was finding data on educational quality and employment for private two-year institutions. The next equally difficult problem was finding comparative data on the employment of graduates of public and private two-year institutions, four-year colleges and universities. Therefore, these research aspects of the original proposal were not followed. The research questions and presentation of data for analysis and interpretation were adjusted accordingly.

As this researcher proceeded with the development of the study, strategies for strengthening the academic position of the public two-year institution surfaced. The strategies were drafted and forwarded to the college president for review. All approved strategies were incorporated in the study. Recommendations were made to the college's administration for applying positive conclusions from the study that were related to a strengthening of the position of the public two-year institution in higher education. In addition, this author used positive conclusions from the study to contribute to a formulation of a contemporary mission statement for the public two-year institution.

Chapter 4

RESULTS

This introductory section for "results" deals primarily with the following question: How does the cost of the education provided by the nation's public two-year institutions compare with the cost of the education provided by the nation's private two-year institutions and public and private four-year colleges and universities? There was a great deal of information available at the national level that was used to definitely answer the question.

Cost of Attending College

The annual cost of a college education at a public two-year institution was less than the cost at a public four-year institution and far less than the cost at a private four-year institution. The cost of attending college was expected to rise in the coming years with public two-year colleges experiencing the least amount of increase. The following Table 1 contains the average annual expenses for students who attended public and private two-year institutions, four-year colleges and universities during 1976, 1978, 1980 and 1982. A projection

Table 1. Average Annual Expenses for College Students

	TWO-YEAR INSTITUTIONS				FOUR YEAR COLLEGES				UNIVERSITIES			
	PUBLIC		PRIVATE		PUBLIC		PRIVATE		PUBLIC		PRIVATE	
YEARS	TUITION AND FEES	TOTAL COSTS ***	TUITION AND FEES	TOTAL COSTS ***	TUITION AND FEES	TOTAL COSTS ***	TUITION AND FEES	TOTAL COSTS ***	TUITION AND FEES	TOTAL COSTS ***	TUITION AND FEES	TOTAL COSTS ***
1976	382	2,597	1,620	3,998	570	2,848	2,381	4,769	692	3,067	3,139	5,843
1978	432	2,862	1,896	4,530	648	3,146	2,681	5,330	789	3,400	3,667	6,673
1980	523	3,276	2,211	5,227	756	2,616	3,069	6,102	903	3,866	4,357	7,799
1982	632	3,751	2,579	6,031	881	4,155	3,514	6,986	1,034	4,389	5,176	9,166
1984	760	4,270	3,000	6,950	1,030	4,750	4,020	7,980	1,160	4,960	6,100	10650

*** The total costs category includes room and board and estimated costs for books, supplies, transportation and personal expenses

Source: National Center for Education Statistics

for 1984 is included. The tuition and fees and total costs categories are less for public two-year institutions than they are for private two-year institutions and public and private four-year colleges and universities. This statement is true for any year cited in the table.

During 1982, the average financially independent student receiving federal financial aid fell $1,488 short of covering educational and living costs even with the students own income and money from other sources. The typical dependent student, one whc received some family support, fell short by $443. Almost no students received aid equal to the total costs of college, even counting their own earnings and any family assistance. In addition, 1982 state appropriations for colleges averaging 6% above the total for 1981 were the smallest over the past 20 years when the average was 14%.

The economic conditions mentioned thus far are expected to have a dramatic impact upon the financing of higher education during the present decade. The following Table 2 contains a list of emerging economic problems for public higher education.

Table 2. Emerging Economic Problems for Public Higher Education

1. Funding for higher education will continue to lose ground to inflation.
2. Families will be expected to shoulder an increasing proportion of college costs.
3. Cuts in federal aid to students will be passed along to families in the form of increased tuition.
4. The lag in state appropriations to higher education will result in increased tuition.
5. Tuition levels are expected to rise roughly at the rate of inflation.

The predictions hit at a feature of public two-year institutions; a low cost educational experience of high quality. A contemporary mission statement for the public two-year institution must accomodate the anticipated impact of a worsening economy for public higher education.

Although the economic predictions for public higher education are gloomy, a national opinion survey conducted by Group Attitudes Corporation (1982) of New York found that higher education had broad support among the general public. The respondents said that all young people with the ability and desire for higher education should have a chance at it. A majority of the adults (54%) who were planning to send their children to college were worried that they might not have enough money. Only 11% were confident they would have enough money to pay their children's college bills while

35% said they were concerned but probably would be able to manage.

Educational Quality

This section deals primarily with the following question: How did the grades of students who transfer from public two-year colleges to public four-year colleges and universities compare with the grades of the regular (native) students at public four-year colleges and universities? The question was asking for information on educational quality. Is the education given to students at public two-year colleges as good as the first two years of education given to students at public four-year colleges and universities? One of the best ways to answer the question on educational quality is to compare the grades of the two groups of students. But, the information must be looked at carefully because there are always other facts to consider and deal with. For example, some consideration must be devoted to exploring the quality of persons entering college. In other words, what has national testing revealed about high school seniors who plan on attending college?

National testing. The decline in Scholastic Aptitude Test (SAT) scores began in the early 1960's. The two areas showing the worst decline were in the verbal and mathematical sections of the test. This meant that college-bound students had become increasingly deficient in

reading, writing and arithmetic. Scholastic Aptitude Test (SAT) scores began rising during 1982 for the first time in nearly two decades. The rise was traced to improve performance by minority groups primarily in both the verbal and mathematical sections of the test. Nevertheless, the high schools of America needed improvement. There were simply too many students attending college who were poorly prepared and therefore forced to take remedial courses.

College enrollment. This brings us to the next supportive question: Where have the students been enrolling in college? Although must public four-year colleges including leading universities have gradually lowered entrance requirements over the years to accomodate the increasing number of underprepared students, they still have remained more selective than the nation's public two-year institutions. Public two-year institutions have accepted a large number of students requiring specialized assistance. In addition, public two-year institutions have provided a haven for minority students. To further exaggerate the problems of some college-bound students and the obligations of the public two-year institution, some of the nation's four-year colleges have tightened entrance requirements. This aspect has been offset somewhat by the fact that some states have been making progress in their efforts to improve the preparation of college-bound students. The increase in total enrollment in public

higher education during 1982 was due primarily to the continued growth of public two-year institutions. The 4,494,202 students enrolled in approximately 1,000 community colleges represented approximately 50% of the nation's collegiate enrollment.

Transfer education. Public two-year institutions have offered students the opportunity to take their first two years of instruction and then transfer to a four-year college or university to complete the two remaining years. This has been an acceptable arrangement for students, but it has been the basis of a longstanding disagreement among educators. The problem can be stated very simply. Educators at public four-year institutions have claimed that their first two years of instruction were superior to the first two years of university-parallel instruction provided by public two-year institutions. One research technique used commonly by members of the two sectors was to compare the grade point averages (GPA's) of juniors or third-year students (referred to as "natives") at public four-year institutions with the junior-year GPA's of students who transferred from public two-year colleges to establish the best prior two-year experience.

The educational literature contained references concerning the fact that students taking their first two years at a public two-year institution and then transferring to a public four-year institution generally earned lower

grade point averages (GPA's) than the "native" students but, tended to improve the GPA's shortly thereafter. The condition was commonly referred to as "transfer shock". However, when the same kinds of transfer and native populations were compared the results showed that there was no difference in academic performance. In other words, students tended to perform at their individual levels of ability regardless of where they went to college.

The generalizations concerning "transfer shock" did not apply to all students, but they did apply to the grand majority of them at all ages and times; therefore, an ancillary problem was to investigate the factors that contributed to the trauma experienced by transfer students and identify ways to minimize the phenomenon. There were specific ways in which "transfer shock" was minimized. They were all related in some way to either improved academic articulation or enhanced academic and career advisement and counseling.

A number of different remedies were reported. The most common remedy was to provide adequate orientation prior to the enrollment of first-year students interested in a transfer education program. A detailed and comprehensive transfer education handbook based upon established state-level policies was made available to interested parties. Special support and counseling services were available to transfer students requesting and needing them. A pretransfer semester was arranged to preliminarily

acclimate transfer students to the approaching dissimilar learning environment. It was helpful to the public two-year institution to have an effectively functioning alumni association that could provide support and aid to students in transfer education programs. One way for a public four-year college to render generalized assistance to transfer students from public two-year colleges was to establish community and junior college alumni chapters on campus.

Student satisfaction. One way to determine whether public two-year institutions offered educational experiences of high quality was to ask the graduates for their opinions on the subject. Community and junior colleges surveyed their graduates routinely on such matters. The following Table 3 contains the results of some representative follow-up surveys.

Table 3. Student Satisfaction with Educational Quality of Public Two-Year Colleges

SURVEY YEAR	COLLEGE	PERCENTAGE OF SATISFIED STUDENTS
1977	Cumberland County Community College	67%
1980	Illinois Valley Community College	95%
1980	Los Angeles Community College	80%
1980	Mercer County Community College	85%

The data indicate a relatively high degree of consumer satisfaction. Such data are not particularly rare. Public two-year colleges routinely conduct surveys producing data indicative of institutional success.

Employability of Graduates

This concluding section deals primarily with the following question: What is the average rate of employment of representative graduates of public two-year institutions? Before statements concerning employability can be made, there must be an assessment of existing kinds of employment opportunities and collegiate efforts to prepare students for employment.

Employment opportunities. One college helped students to prepare for the world of work by providing them with a handbook which outlined career information, and options based upon job requirements needed for employment directly upon graduation. In addition, there was a need to advise graduates of public two-year institutions about their highly competative employability. Interestingly enough, there were several categories of two-year associate degree graduates who tended to fare as well and sometimes better with their job hunting pursuits than competitors with higher degrees such as three-year diplomas and four-year bachelor's degrees. The following Table 4 contains the names of some programs at two-year institutions that produce graduates with high employment opportunities.

Table 4. Two-Year Programs with Reported High Employability

1. Nursing	5. Engineering
2. Nutrition	6. Chemical Technician
3. Health	7. Secretarial Science
4. Computer Science	

Employment preparedness. Public two-year institutions have helped students prepare for and procure employment upon graduation. One way in which public two-year institutions helped was based upon expanded articulation. Academic programs with low employability such as liberal arts were linked with occupational programs offered through cooperative or career education and then tied into local businesses and industries through improved articulation arrangements and agreements resulting in far greater employment opportunities for graduates. In some cases, programs were created cooperatively by colleges and industry to prepare employees for a new career area. In general, the efforts found approval and satisfaction from graduates and employees alike. One reason for overall success was the development of detailed handbooks designed to guide activities of comprehensively membered advisory committees.

Employment rates of graduates. Numerous employment opportunities await many graduates of public two-year

institutions. Colleges have continually devised ways to increase opportunities. These facts lead to a consideration of actual rates of employment. The average employment rate of graduates of some representative public two-year institutions was found to be 84%. (Table 5)

Table 5. Average Employment Rate of Graduates of Representative Public Two-Year Institutions

COLLEGE AND STATE	EMPLOYMENT PERCENTAGE	YEAR REPORTED
Ceritos College/CA	81%	1981
Cumberland County C.C./NJ	85%	1979
Greenfield C.C./MA	84%	1980
Lane C.C./OR	90%	1982
Maryland C.C. System/ML	75%	1980
Mercer County C.C./NJ	90%	1982
Miami-Dade C.C./FL	77%	1980
New Hampshire Technical Institute System/NH	92%	1981
Average Rate	84%	N.A.

Colleges use information concerning the employment of graduates. Such information provides a yardstick for measuring a college's effectiveness in preparing students for employment and aiding them in their search for jobs.

Concerns of higher education. A national survey of state-level policy leaders revealed five emerging areas

of concern for higher education: educational quality, basic skills and remedial programs, physical plant update and replacement, public tuition levels, and federal student grant policy. Low cost and high quality education were strongly represented in the policy leader's predictions of emerging problemmatic areas for higher education during the present decade; however, concern for the employability of graduates was absent.

Information on the subject coming from statewide studies conducted by Arizona and California is conceptually broader and somewhat more inclusive especially in terms of contemporary issue and concerns pertaining specifically to public two-year institutions.

1. Improving the implementation of open-admissions policies through student assessment, screening and placement in courses and programs appropriate to students' skills and abilities

2. Improving articulation with high schools and utilizing newly created high school graduation proficiency testing as competency standards for entering freshmen

3. Allocating affirmative action funds to programs to recruit minority students into transfer programs and programs for severely disadvantaged minority adults

4. Giving instruction in transfer, occupational and general education top priority with basic skills instruction receiving the second highest priority

At the state level, the emphasis appears to be on educational quality with allusions to financing the enterprise and preparing students for the world of work. The picture shifts dramatically when statements concerning educational emphasis emanate from a local level of public two-year education.

1. Academic and career advisement
2. Job preparation classes
3. Job placement
4. Cooperative programs with employers
5. Referrals to volunteer cooperative programs with employers
6. Referrals to volunteer service agencies, government sponsored programs, and legal and medical services
7. Apprenticeships

Chapter 5

DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

The purpose of this study was to investigate three major questions dealing with the comparative cost and quality of the education provided by the nation's public two-year institutions and the employability of their graduates.

1. How did the cost of the education provided by the nation's public two-year institutions compare with the cost of the education provided by the nation's private two-year institutions and public and private four-year colleges and universities?

2. How did the grade point averages (GPA's) of students transferring from public two-year institutions to public four-year colleges and universities compare with the GPA's of "native" students at public four-year colleges and universities?

3. What was the average employment rate of graduates of representative public two-year institutions?

Discussion and Implications

This section deals initially with the question;

How did the cost of the education provided by the nation's public two-year institutions compare with the cost of the education provided by the nation's private two-year institutions and public and private four-year colleges and universities? Fortunately, there was a wealth of national data available that helped to answer the question.

Cost of attending college. The annual cost of a college education at a public two-year institution was less than the cost at a public four-year institution and far less than the cost at a private four-year institution. The cost of attending college is expected to rise in the coming years with public two-year colleges experiencing the least amount of increase. The most obvious conclusion one could draw was that the least expensive way for a student to attend the first two years of college was to live at home; commute to a local public two-year institution by public transportation; try to offset costs for tuition and fees by obtaining financial aid, a fee waiver or a scholarship; and, hold a part-time job to provide money for books, supplies and personal needs. It was not impossible for at least some if not all of these factors to fall into place. Given all of the factors being operational, it was probable to assume that almost any deserving person could have attended college. There were two factors that kept the overall concept from being completely applicable; cuts in federal financial aid money and general reductions in state level

allocations for public higher education, especially public two-year institutions.

The emerging economic problems for public higher education were extremely disturbing. They tended to hit at a feature of public two-year institutions that was one of its major attractants; a low cost educational experience of high quality. A contemporary mission statement for the public two-year institution must reflect a commitment to keeping costs to students and their families for the educational experiences provided to an absolute minimum without reducing educational quality.

Educational quality. This part deals mostly with the following question: How did the grades of students who transferred from public two-year colleges to four-year colleges compare with the grades of the regular (native) students at four-year colleges? One way to answer the question was to compare the grades of the two groups of students. Some consideration was devoted to exploring the quality of persons entering college.

The decline in Scholastic Aptitude Test (SAT) scores began in the early 1960's. College-bound students had become increasingly deficient in reading, writing and arithmetic. There were simply too many students attending college who were poorly prepared and therefore forced to take remedial courses. Although most public four-year colleges including leading universities have gradually

lowered entrance requirements over the years to accomodate the increasing number of underprepared students, they were still more selective than the nation's public two-year institutions. In terms of the college-bound student with poor grades, low SAT scores and little money, the public two-year institution's "open door policy" was a salvation. Public two-year institutions accepted a large number of students requiring specialized assistance. In addition, public two-year institutions were also a haven for minority students. To further exaggerate the problems of some college-bound students and the obligations of the public two-year institution, some of the nation's four-year colleges were tightening their entrance requirements. This aspect was offset somewhat by the fact that some states were making progress in their efforts to improve the preparation of college-bound students.

One important function of public two-year institutions has been to offer students the opportunity to take their first two years of instruction and then transfer to a public four-year college or university to complete the two remaining years. The educational literature contained references concerning the fact that students taking their first two years at a public two-year institution and then transferring to a public four-year institution generally earned lower grade point averages (GPA's) than the "native" students but, tended to improve the GPA's shortly thereafter. The condition is commonly referred to as

"transfer shock".

There was absolutely no way to accurately draw conclusions from studies that simply compared the GPA's of entire populations of transfer and native students. The first point to recall was that public four-year institutions had selective admissions policies while public two-year colleges had an "open door policy". This meant that initially the freshman class at a public four-year institution would contain nothing less than moderately underprepared students while the freshman class at a public two-year institution would include not only a disproportionate share of underprepared students but all of the severely underprepared. Carrying representatives of these two populations forward to the third or junior year of college and then comparing their GPA's would have been the same thing as comparing apples and oranges.

Since no attempt was made to control the situation and compare only the same kinds of population, resultant data were essentially useless. The proof for this position existed in the literature. When the same kinds of transfer and native populations were compared, the results showed that there was no difference in academic performance. In other words, students tended to perform at their individual levels of ability regardless of where they went to college.

There was always the possibility that some underprepared high school students, especially the severely underprepared, may well have lacked the intrinsic abilities

needed for academic survival at later collegiate years. In other words, their "native potential" may have been exhausted and they may have simply reached their levels of academic competancy evidenced by their inability to perform successfully at the collegiate junior year and beyond. In this context, it was a problem of ability and not underpreparedness and certainly not a question of educational quality. The solution to this issue resides in realistic and honest academic and career advisement and counseling at both secondary and postsecondary levels based primarily upon appropriate testing.

The term "transfer shock" was a misnomer. The phenomenon of trauma was a reality but, it was not a product of transfer. It was a product of entrance; therefore, the phenomenon should have been called "entrance trauma". Many college freshmen generally experienced an initial period of lower grades than expected but then tended to improve immediately thereafter. Any high school student going away to college for the first time left all familiar comfort and support behind and entered a completely new and very different environment. Obviously, time was required to adjust to new conditions. The student experienced "entrance trauma".

The educational setting of public two-year colleges was closely linked to local secondary schools. The student generally continued to live at home or nearby, maintained

basically the same or very similar circle of associates and encountered an educational setting similar to high school. The only real difference was the college's focus on academic performance and achievement. Upon completing studies at the local public two-year institution, the student generally left "home" for the first time to attend a public four-year college - leaving all familiar comfort and support behind - and entered a significantly different environ. At that time, the transfer student, being much like the high school student entering college for the first time, experienced "entrance trauma" and not "transfer shock".

The problem of "entrance trauma" has been a greater problem for public four-year colleges than for public two-year colleges. Public four-year institutions have had enrollees at both the freshman and junior years experiencing the phenomenon while public two-year colleges have contended with the phenomenon at only the freshman level. Public four-year colleges and universities must realize that fact and work diligently with high schools and community and junior colleges to alleviate the problem.

The generalizations concerning "entrance trauma" did not apply to all students but, they did apply to the grand majority of them at all ages and times. Therefore, the real problem was to investigate the factors that contributed to the "entrance trauma" experienced by transfer students and to suggest ways to at least minimize the impact of the phenomenon because obviously, the educational

experiences offered by both public two-year and four-year institutions were comparable in quality.

The "entrance trauma" experienced by students enrolled in transfer education or university-parallel programs could be reduced through appropriate articulation, testing, advisement and counseling by all sectors involved. The most important facet of the problem will be the initial need for academic articulation of at least an adequate and acceptable nature. In reality, the public two-year college has served as a transition or interim entity between the high school and four-year college; therefore, it will be incumbent upon the two-year college to energize effective academic articulation. The only way this will happen is to have all articulation agreements and policies worked out statewide. That may sound like an overwhelming task, but it will be an absolute imperative. In support of effective academic articulation, there must be an accompanying adequacy of academic and career advisement and counseling based primarily upon standardized testing programs used commonly. It will be impossible to give effective advice and counsel based upon floating criteria.

The reasoning underlying all these necessities was based upon the fact that public higher education was obligated to provide educational opportunities to deserving persons. Allowing some students to test or try the system and rise to academic levels of competence short of graduating from a four-year college may have been

philosophically and educationally acceptable, but at the same time, it was becoming less feasible economically. Certainly a paradox existed; hence, the importance of realistic and practical advisement and counseling.

There were specific ways in which "entrance trauma" was minimized. They were all related in some way to either improved articulation or enhanced advisement and counseling. The most obvious remedy was to provide adequate orientation prior to the enrollment of first-year students interested in a transfer education program. A detailed and comprehensive transfer education handbook based upon established state-level policies was made available to all interested parties. Special support and counseling services were available to all transfer students requesting and needing them. A pretransfer semester was arranged to preliminarily acclimate transfer students to the approaching dissimilar learning environment. It was extremely helpful to each public two-year institution to have an effectively functioning alumni association that provided support and aid to students in transfer education programs. One of the most effective ways a public four-year college could render generalized assistance to transfer students from public two-year colleges was to establish community and junior college alumni chapters on campus. Public two-year institutions could be instrumental in furthering this effort.

One of the simplest ways to determine whether public two-year institutions offered educational experiences

of high quality was to ask the graduates for their opinions on the subject. Community and junior colleges have surveyed their graduates routinely on such matters. The reported data indicated a relatively high degree of student satisfaction. Such data were neither particularly rare nor surprising. Public two-year colleges have responded to the rising tide of student consumerism by conducting surveys producing data supportive of institutional success.

Employability of graduates. This concluding part deals primarily with the following question: What was the average rate of employment of representative graduates of public two-year institutions? The expectation was that the graduates would be successful at finding jobs because their high quality education rendered them highly employable in a most competative marketplace.

One way colleges have helped students to prepare for the world of work was to provide them with handbooks which outlined career information, and options based upon job requirements needed for employment directly upon graduation. In addition, there has been a need to advise graduates of public two-year institutions about their highly competative employability. Interestingly enough, there were several categories of two-year associate degree graduates who tended to fare well and sometimes better with their job hunting pursuits than did their competitors with higher degrees such as three-year diplomas and four-year

bachelor's degrees.

Some collegiate programs have oversupplied real demand. Institutions of higher education need to work together and do a better job of keeping the supply of graduates from academic and vocational programs in better balance with the real demand for employees. Keeping supply and demand in balance at the state level should be an absolute imperative. If this were done, then similar balances at local, regional and national levels would fall into place. The issue of balance should be reflected in a contemporary mission statement for public two-year institutions.

One way public two-year institutions have helped students to prepare for and procure employment upon graduation was based upon expanded articulation. Academic programs with low employability were linked with occupational programs and then tied to local businesses resulting in far greater employment opportunities. Some programs have been created cooperatively by colleges and industry to prepare employees for a new career area. In general, the efforts have found approval and satisfaction from graduates and employees alike. One reason for overall success has been the development of detailed handbooks designed to guide activities of comprehensively membered advisory committees. There are numerous employment opportunities awaiting many graduates of public two-year institutions. Colleges have continually devised ways to

increase the opportunities. The average employment rate of graduates of some representative public two-year institutions was 84%.

Colleges needed information concerning the employment of graduates. Such information provided an essential yardstick for measuring a college's effectiveness in preparing students for employment and aiding them in their search for jobs. Therefore, a contemporary mission for public two-year institutions should include a statement regarding the need for gathering current follow-up data concerning the employment of graduates. Such data will be essential to institutions wishing to offer timely, cost-effective and high-quality educational programs that will maintain a balance between the supply of graduates and the demand for employees.

Recommendations

The purpose of this study was to investigate the comparative cost and quality of the education provided by the nation's public two-year institutions and the employability of their graduates. An extensive review of available information on the subjects of cost, quality and employability produced three major conclusions and a number of recommendations. Each major conclusion and subtending recommendations follow:

1. The nation's public two-year institutions have been providing the least expensive collegiate education.

In addition, the education provided has had broad support from the general public.

a. Public two-year institutions should keep educational costs to students and their families at the lowest possible minimum without sacrificing educational quality.

b. Public two-year institutions should pursue individually and cooperatively and more effectively the acquisition of funds at all levels.

2. The grade point averages (GPA's) of similar populations of transfer and native students were comparable; therefore, the education provided by public two-year institutions and four-year colleges and universities was of a comparable quality.

a. Public two-year institutions should retain the "open door" admissions policy to guarantee that deserving and capable students will be afforded a collegiate experience within educationally justifiable and economically feasible limits.

b. Public two-year institutions should continue to improve academic and career articulation agreements and arrangements with other institutions of higher education, high schools, businesses and industry.

c. Public two-year institutions should continue to develop detailed and comprehensive handbooks concerning academic and career articulation for use by all parties involved especially students.

d. Public two-year institutions should continue to offer remedial education to needy incoming students.

e. Public two-year institutions, other institutions of higher education and high schools should cooperatively engage in realistic, practical and honest academic and career advisement and counseling based primarily upon standardized testing used commonly in order to provide transfer students with the best support services possible.

f. Public two-year institutions should conduct research resulting in ways to enhance the success of transfer students.

g. Public two-year institutions should have alumni associations that initiate support and assistance to students in transfer education programs.

3. Graduates of public two-year colleges have a high rate of employability.

a. Public two-year institutions should continue to use advisory committees effectively, especially those concerned with occupational and cooperative education.

b. Public two-year institutions should link liberal arts programs with vocational and cooperative education programs to enhance the employability of liberal arts majors.

c. Public two-year institutions should continue to improve their methods for gathering adequate follow-up data concerning the employment of graduates.

d. Public two-year institutions should work cooperatively with other institutions of higher education on a statewide basis to create better balance between the supply of graduates and the demand for employees.

The education offered by the nation's public two-year institutions was of the lowest cost available, a quality comparable to four-year colleges and universities and resulted in a high employment rate for graduates.

Mission. Three very important facts about the nation's public two-year colleges have been revealed. First, they have provided the least expensive education available. Second, the quality of the education they have provided was just as good as that offered by four-year colleges and universities. And third, their graduates have experienced a high rate of employability. These three educational facts; low cost, high quality and high employability, comprise a significant part of the basis for the very existence of the public two-year institution in America.

The public two-year college needed a comprehensive and contemporary mission statement to establish its purpose, set its course and guide it through future years of providing high quality educational service to consumers. No statement of educational mission would be complete without full attention being given to the three major facets of cost, quality and employability which have been undoubtedly of extreme importance to the consumer.

Therefore, a generalized statement of mission was in order for the public two-year college which included the three aspects of low cost education, high quality education and high employability of graduates.

> The public two-year college will continue to provide the lowest cost educational opportunity. The service will be well worth its cost to the public and will continue to enjoy broad support from the general public. In order to better finance the enterprise, colleges will pursue cooperatively and more effectively than ever before the acquisition of funds from all available levels. Enhanced funding will help the colleges to keep educational costs to students and families of students at the lowest minimum possible without ever having to sacrifice educational quality.
>
> The public two-year college will continue to provide educational opportunities of the same high quality as those provided by four-year colleges and universities. The "open door" admissions policy will be retained in order to guarantee that deserving and capable students are afforded a collegiate education. The colleges will effectively maintain academic and career articulation agreements and arrangements with other institutions of higher education, high schools, businesses and industry. Remedial education will continue to be offered to needy incoming students. The colleges will provide students in transfer education programs with the best support services possible. The service will involve giving students very honest academic and career advisement and counseling based in part on the results of commonly used tests. Detailed and comprehensive handbooks concerning academic and career articulation will be developed especially for students to use. The colleges will conduct more research

> relevant to increasing the success of students in transfer education programs. The number of colleges having alumni associations will increase dramatically. An important function of the associations will be to provide support and assistance to transfer students.
>
> Graduates of the public two-year college will continue to have high employability. The effective use of advisory committees, especially those concerned with occupational and cooperative education, will contribute markedly to that end. In addition, an increasing number of the colleges will link liberal arts programs with vocational and cooperative education programs to enhance the employability of liberal arts majors. The colleges will continue to improve their methods for gathering follow-up data concerning the employment of graduates. This kind of information will help the colleges to create a better balance between the supply of well-prepared graduates and the demand for competent employees.

Corroboration of mission. The previously stated conclusions and recommendations concerning educational cost and quality and employability of graduates presented in the form of a contemporary mission statement for the public two-year college. Since the mission statement was essentially charting a future course for the public two-year college, it can also be said that it actually represented a set of predictions. This idea forced a question to come to mind; Was there a basis for the predictions? One of the best ways to answer the question was to compare the predictions with available information on the subject of emerging issues and concerns for higher education for the current decade.

A national survey of state-level policy leaders revealed five emerging areas of concern for higher education: educational quality, basic skills and remedial programs, physical plant update and replacement, public tuition levels, and federal student grant policy. Obviously, the predictions concerning low cost and high quality education were represented in the policy leaders' forecast of emerging problemmatic areas for higher education during the present decade. However, the reinforcement of the predictions concerning the employability of graduates was conspiciously absent. Apparently, the employment of college graduates was not considered to be a major policy issue for the nation at large. If nothing more, this indicated a continued lack of concern at the national level for generating a policy statement that would help to bring about a much-needed and long-awaited balance between the estimated supply of employable college graduates and the real demand for competent employees with a college education.

Information on the subject coming from statewide studies conducted in Arizona and California was conceptually broader and somewhat more inclusive especially in terms of contemporary issues and concerns pertaining specifically to public two-year colleges.

1. Improving the implementation of open-admissions policies through student assessment, screening and placement in courses and programs appropriate to students' skills and

abilities.

2. Improving articulation with high schools and utilizing newly created high school graduation proficiency testing as competency standards for entering freshmen.

3. Allocating affirmative action funds to programs to recruit minority students into transfer programs and programs for severely disadvantaged minority adults.

4. Giving instruction in transfer, occupational and general education top priority with basic skills instruction receiving the second highest priority.

At the state level, the emphasis appeared to be on educational quality with allusions to financing the enterprise and preparing students for the world of work.

The picture shifted dramatically when areas of educational emphasis were identified at a local level of public two-year collegiate education.

1. Academic and career advisement
2. Job preparation classes
3. Job placement
4. Cooperative programs with employers
5. Referrals to volunteer cooperative programs with employers
6. Referrals to volunteer service agencies, government-sponsored programs, and legal and medical services
7. Apprenticeships

Obviously, employability and employment of graduates were major concerns at the local level. Attention was also given to educational quality, but, concern for educational costs did not appear to be strongly visible.

Conclusion. The predictions incorporated in the contemporary mission statement for the public two-year college reflected the reported issues and concerns and areas of emphasis confronting higher education during the present decade. However, concern for maintaining low educational costs, high educational quality and improved employability and employment of graduates received differing degrees of attention and consideration at local, state and national levels. This final fact must be taken into account when formulating a comprehensive mission statement in order to guarantee the creation of a practical, reasonable and more importantly, broadly applicable and workable treatise.

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